

P001 802 PC/HG

Claims:

- 5 1. An access network adapted to communicate with a mobile terminal and
packet service nodes in a core network portion (20) of a mobile
telecommunications network, said access network comprising:
a plurality of local base stations (301) each defining a mini-cell and
adapted to communicate with mobile terminals (1) located in a respective
10 mini-cell over an unlicensed-radio interface (31);
an access network controller (303) connected to a packet service node in
said core network portion and adapted to communicate with said packet
service node over a predetermined licensed mobile network interface, and
connected to said plurality of local base stations (301);
15 characterised in that
said mini-cells (304) are grouped into at least two packet service cells with
at least two mini-cells in each packet service cell and said local base
stations (301) are assigned a cell identifier comprising a first identifier
portion that is common for all local base stations connected to said access
20 network controller (303) and a second identifier portion that is common for
all local base stations in the same packet service cell but different for local
base stations in different packet service cells.
- 25 2. An access network as claimed in claim 1, characterised in that said access
network controller (303) is assigned a cell identifier comprising said first
identifier.
3. An access network as claimed in claim 1 or 2, characterised in that said
access network controller (303) is adapted to communicate to said packet

service node (203) location update messages from mobile stations (1) containing first and second identifier portions of a cell identifier.

- 5 4. An access network as claimed in any one of claims 1 to 3, characterised in that said core network comprises a plurality of voice switching nodes, wherein said access network controller (303) is connected to one voice switching node (202), and in that only said first identifier portion is configured in said voice switching nodes in the core network portion.
- 10 5. An access network as claimed in claim 4, characterised in that said access network controller (303) is adapted to receive a handover request from the voice switching node (202) connected thereto, wherein said handover request contains only said first identifier portion of said cell identifier.
- 15 6. An access network as claimed in any previous claim, characterised in that said local base stations are adapted to communicate said cell identifier to mobile terminals in said mini-cells.
- 20 7. An access network as claimed in any previous claim, further characterised by a fixed broadband network (302) connecting said plurality of local base stations (301) with said access network controller (303).
- 25 8. An access network as claimed in any previous claim, characterised in that said cell identifiers are dynamically assigned to said mini-cells by said access network controller.